EXHIBIT 1
DATE 4/6/11
SB 265

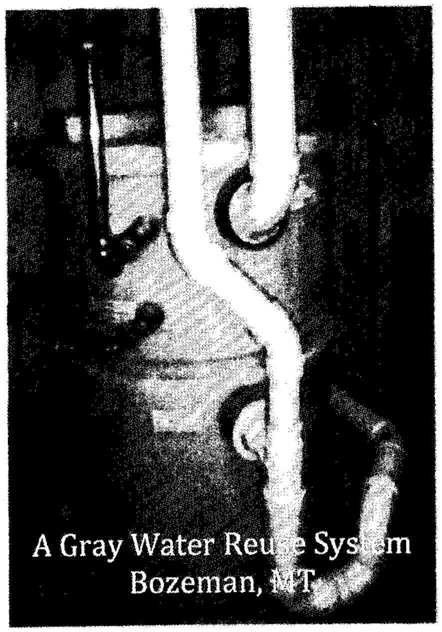
SB 265

REDUCE PROPERTY TAXES ON NEW CONSTRUCTION FOR USE OF GRAY WATER SYSTEMS

This bill provides a property tax abatement for new residential structures that install a gray water reuse system. This ensures that Montanans who are committed to reducing water use and conflicts over water are supported.

Gray water basics:

- "Gray Water" is wash water from the laundry machine, shower/tub, and lavatory sink. This water is less contaminated than "black water," the water from toilets (or kitchen sinks)
- It can be safely reused for flushing toilets year round and for (belowground) seasonal irrigation.
- Reusing gray water helps reduce the total amount of water used by the household.
- This reduces conflicts over water use in Montana.
- Gray water systems will increase long-term value of the property.
- Can preserve infrastructure capacity of water and waste water system; extend septic system life.


A Gray Water Reuse System
Bozeman, MT

Proponents include:

- The Montana Association of Realtors
- Montana Building Industry Association
- Conservation groups like the Student Advocates for Valuing the Environment (S.A.V.E.) and the Clark Fork Coalition.

Gray water reuse systems are an innovative technology.

- Encouraging the use and installation of these systems will support cutting edge industry in Montana.
- The systems are complicated and require investment in training for a new workforce and local regulators.
- Increasing the demand for gray water systems will provide installers and regulators with the necessary experience.

The costs of gray water systems are upfront and savings accrue over time.

- This bill will shorten the payback period for gray water reuse systems.
- This tax abatement will only apply to new construction and **NEW** tax revenue.
- This is an appropriate incentive to increase demand of these systems and provide a break to new households.

The Fiscal Note: Includes the cost of a service call to upgrade the Department of Revenue's Orion software system to include the abatement. This can be combined with changes caused by similar bills or scheduled with routine maintenance to cut down on cost.

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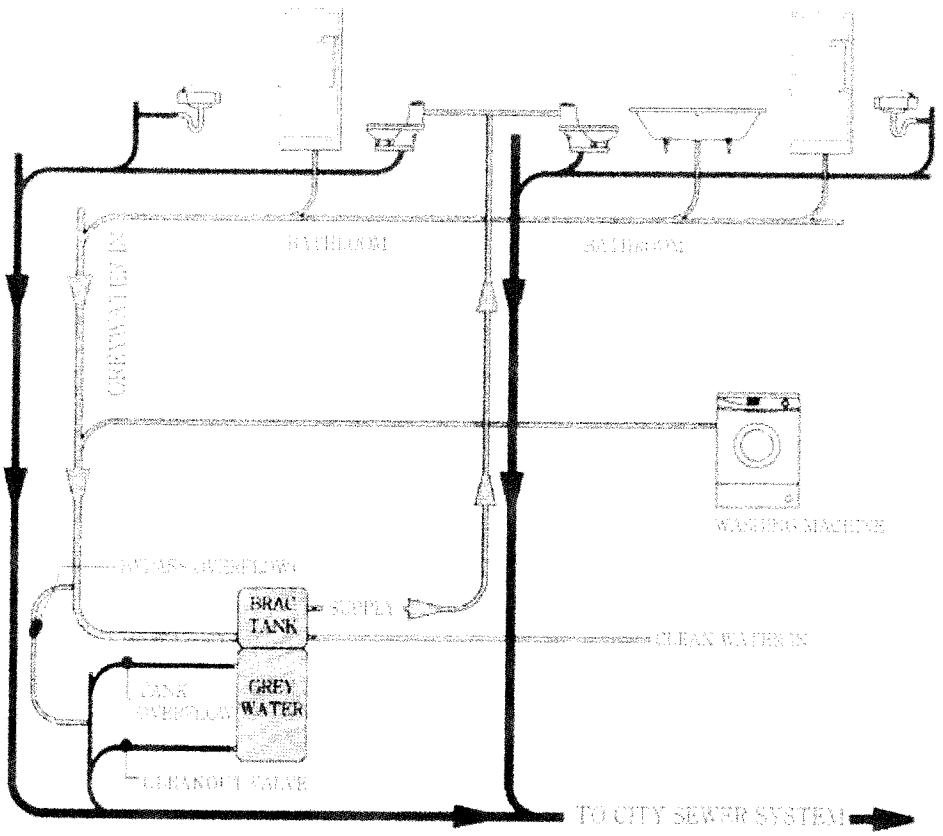
Gray Water Uses

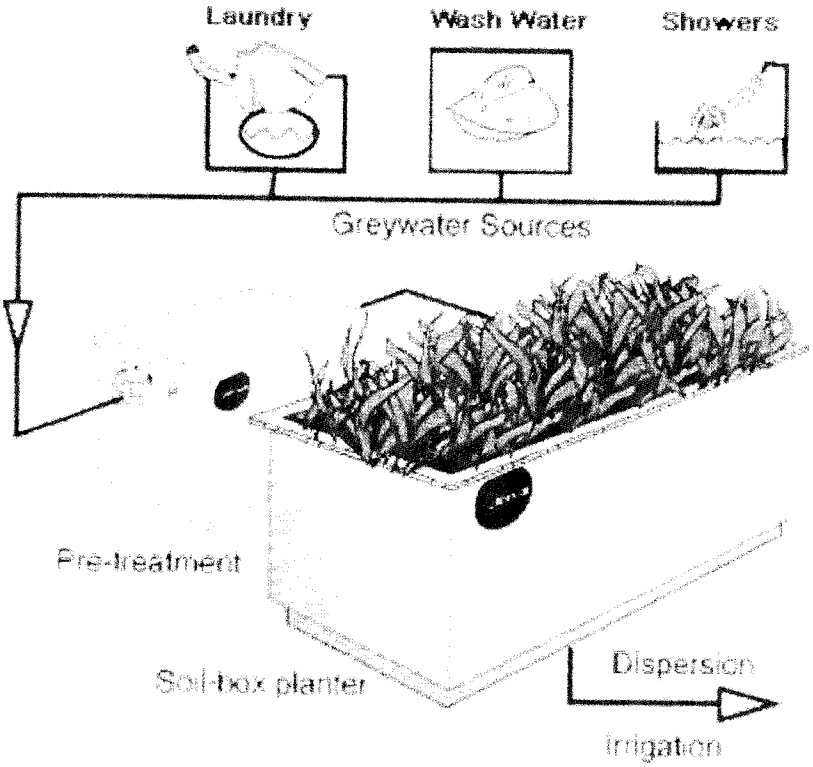
Gray Water for Toilet Flushing

The use of gray water for toilet flushing applications consists of a simple system in which the gray water is collected separately from the other household wastewater. The gray water is temporarily held in a storage tank. When a toilet is flushed it draws water into its tank through a pipe connected to the gray water storage tank instead of from the well or municipal water supply.

It is recommended that gray water is stored for less than 24 hours.



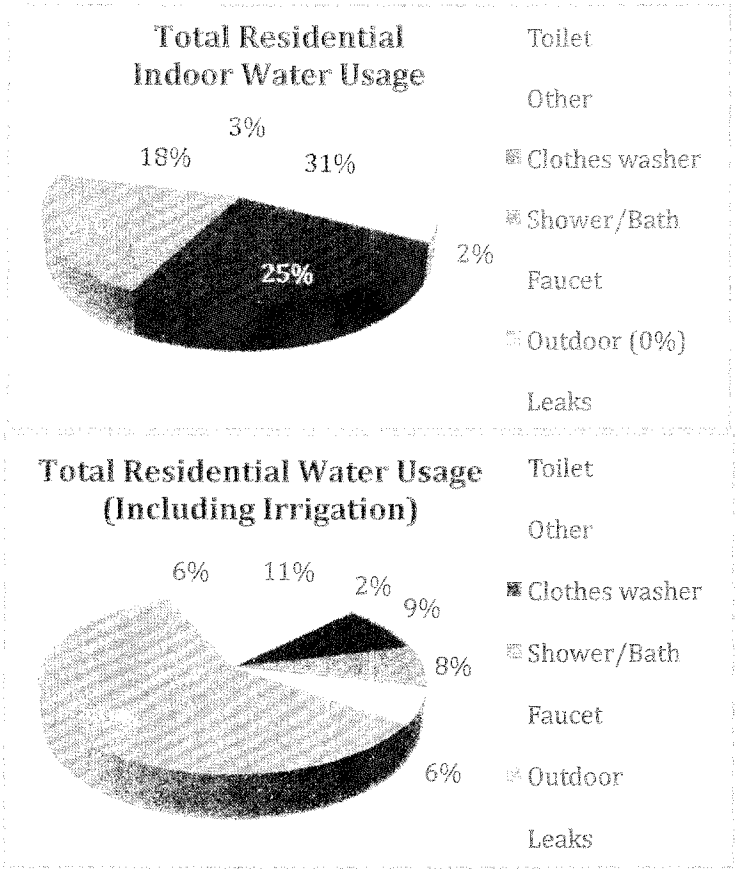
Source: BRAC Systems. "Installation Manual and User Guide." 2009.



Gray Water for Irrigation

When using gray water for outdoor irrigation purposes, the gray water is collected separately from other wastewater and directed to a subsurface dispersal system of piping. These systems may or may not have a storage tank, and sometimes require pumps to move water uphill. These systems are used only during the irrigation season. The system is required to be equipped with a three-way valve that will divert gray water to the existing wastewater treatment facility (sewer or septic) during winter months.

- Gray water use can account for anywhere between 20-60% of total household water use, depending on how much is used for other uses such as outdoor irrigation (Aquacraft Inc., 1995).



- Gray water can be reused indoors for toilet flushing. Three retrofits of this nature have been installed in Helena and Bozeman.
- Gray water can be used for outdoor irrigation for with a subsurface irrigation system.

Other points of interest:

- As an added benefit, a gray water reuse system will increase the long-term value of the property.
- The benefit of having a tax abatement on new property, only, and not on renovations is that the existing tax base will not decrease.

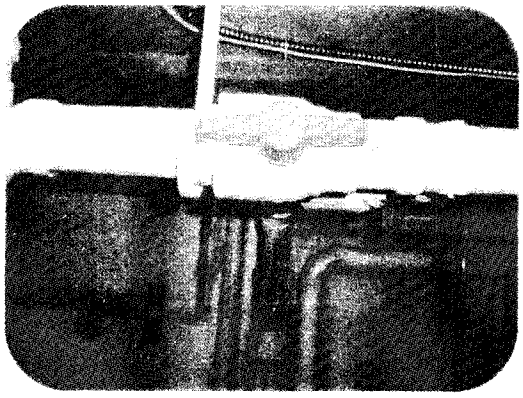
Citations

Aquacraft, Inc. and American Water Works Association Research Foundation (AWWARF). "Residential Water Use Summary." 1995. http://www.aquacraft.com/Publications/resident.htm

BRAC Systems. "Welcome to BRAC Systems: Care for the Environment While Saving Money." 2011. http://www.bracsystems.com/

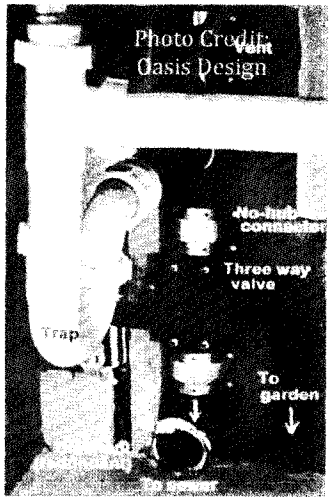
Legal History of Gray Water in Montana

The 2007 Legislature legalized the reuse of gray water in single-family residences and in 2009, the single-family residence component was removed making it legal for all building types including commercial, multifamily, and institutional buildings. Also in 2009, the reuse of gray water for irrigation was made exempt from review under the nondegredation policy, meaning that the system owner does not need to perform calculations and meet state limits on nitrate levels. The idea is that since there will be plant uptake of phosphorus and nitrates, there will be no significant contribution of those substances to the ground water.



Following the enactment of these laws, the Montana Department of Environmental Quality issued rules and regulations for implementation of the law as it pertains to outdoor irrigation. DEQ does not regulate the usage of water inside the house, so no special permit is necessary for reusing gray water for waste transfer (toilet flushing). Local health departments are responsible for issuing permits for the gray water irrigation systems. Basic guidelines set out by DEQ include:

- There must be **subsurface dispersal** of at least 6 inches below the surface to avoid human contact with the gray water.
- All **piping must be marked as gray water**, so future property owners know not to cross-contaminate the pipes with their potable (drinking water) supply.
- The **soil must be tested** for its ability to absorb water (a percolation test), and with estimates of gray water production it can be determined if the soil area will be able to handle that quantity of water. This is also a way to ensure that the gray water won't puddle and come into contact with humans.
- All gray water irrigation systems must be equipped with a **three-way diverter** valve which can direct gray water to the irrigation system in the summer and to the normal wastewater treatment system (sewer or septic) in the winter.
- It is essential to include **backflow prevention** devices that will prevent gray water from overflowing into the potable water supply, or back up into the building.
- Systems including a surge tank should ensure the tank is at least 50 gallons, covered, easily accessible for maintenance, and connected to the wastewater treatment system for overflow.



Each system must be custom designed to suit the building and the property. When all gray water sources are above ground level, a gravity fed system can be installed easily because storage tanks and pumps are not necessary.